THE LAZAR INSTITUTE
McLean, Virginia

ASSESSMENT OF METHODS USED BY STATE AND LOCAL GOVERNMENTS TO ESTIMATE DRUG ABUSE LEVELS

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About the Principal Investigator

Raymond H. Milkman is Director of The Lazar Institute, a non-profit public policy research organization. As illustrated by this monograph, one of his primary interests is drug abuse program evaluation, a field to which he has made contributions over the last two decades. Prior to joining Lazar in 1973, he served as Director of Evaluation at the White House Special Action Office of Drug Abuse Prevention and as Assistant Director for Program Analysis at the Economic Development Administration, U.S. Department of Commerce.

ABSTRACT

In order to improve the state of knowledge about how State and local governments assess the extent of their drug abuse problem, Lazar conducted a survey of over 200 locales and case studies of 12 States with exemplary approaches. Key findings that resulted from the study are:

- Most locales are not devoting substantial resources to drug use assessment activities, but they are collecting a wide range of data on drug use.
- Most are using elementary approaches to analyze available data on drug use. There are, however, a small number of jurisdictions which are employing relatively sophisticated methodologies to assess the extent of their drug problem.
- Jurisdictions do not, in general, have a high degree of confidence in their assessments, and they are not a key input to drug program policy.

On the basis of its research, Lazar concluded that:

- Drug use assessments in most jurisdictions are not as accurate as they might be if improved analysis procedures were employed and more resources were devoted to assessment functions.
- Only a handful of State and local governments are as capable as the Federal government in terms of their ability to estimate levels of drug abuse in their jurisdictions.
- Nonetheless, model programs exist which could be replicated inexpensively in less advanced jurisdictions.
- Provision of a how-to manual and a staff training course could result in significant improvements in jurisdictions' drug use assessments and perceptions of those assessments.

Lazar believes that the lack of a consensus at the Federal level on how to assess the incidence and prevalence of drug use and the paucity of Federal guidance have contributed to the lack of uniformity and general inadequacy of approaches at State and local levels. As a result, Lazar recommends that the Federal government take the lead in developing a model approach and conveying it through provision of a manual and staff training to appropriate jurisdictions. Indeed, it is estimated that up to 80 percent of State and local governments could benefit from such assistance. In addition, Lazar recommends that jurisdictions' drug use assessment capabilities continue to be monitored to determine whether improvements occur and what continuing needs for technical assistance exist.

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1.1 Background

In the late 1960's, many American communities first experienced what have since been labeled "epidemics" 1/ of drug abuse. Since that time drug abuse has become an even more widespread, though still poorly understood, phenomenon--taking many forms and affecting many different types of individuals. In 1981, expert estimates of the number of heroin addicts in the United States ranged from 500,000 to 750,000, 2/ and the last decade has witnessed a sharp increase in the popularity of cocaine, PCP, and other "recreational" drugs.

As drug abuse (and public awareness of it) spread in the 1960's and early 1970's, the criminal justice and health care systems adopted a wide range of procedures and programs designed to respond to the problems and needs caused by expanding drug usage. In the case of the criminal justice system, the approaches included increasing the resources devoted to drug law enforcement (e.g., to apprehending and prosecuting suppliers and dealers), and initiating activities like the Treatment Alternatives to Street Crime (TASC) Program, which originated at the instigation of the Federal government and subsequently received funding from States and localities. The TASC Program involved directing selected arrestees with drug problems into treatment programs, thereby reducing the workload of the courts, contributing to efforts to alleviate overcrowding of corrections facilities, and providing help for individuals by giving them strong incentives to remain in treatment. 3/

In the case of the health care system, a variety of treatment programs were established. These programs incorporated diverse methods for dealing with drug abuse, such as long-term (e.g., one year or more) residence in "therapeutic communities"; group and individual counseling on an outpatient basis; hospitalization for detoxification; the use of chemical substances, such as methadone, for the maintenance of heroin addicts; and a variety of other techniques. 4/ These programs were instituted both in community settings and, within the corrections environment, in jails and prisons.

The modifications in the criminal justice and health care systems in response to drug abuse problems were accompanied and assisted by efforts to develop accurate measures of drug abuse. Since that time, however, little progress has been made in assessing the incidence and prevalence of drug abuse at the local level. In fact, measurement capabilities have

1 Nicholas J. Kozel and Edgar H. Adams, "Epidemiology of Drug Abuse: An Overview" (Science, Vol. 234, p. 970).

2 John Kapkan, The Hardest Drug: Heroin and Public Policy, Chicago, University of Chicago Press, 1983, p. 2.

3 Mary A. Toborg, Raymond H. Milkman, et al., Treatment Alternatives to Street Crime (TASC) Projects, National Evaluation Program, LEAA, U.S. Department of Justice, 1976.

4 See James V. DeLong, "Treatment and Rehabilitation," in Dealing with Drug Abuse, (New York City, N.Y.: Praeger Publishers, 1972) and Raymond Glasscote, et al., The Treatment of Drug Abuse (Washington, D.C.: Joint Information Service of the American Psychiatric Association, 1972).

slipped badly in the last decade as a result of the decentralization of the treatment system, which is now essentially a series of State programs assisted by funding through the Alcohol, Drug Abuse and Mental Health Services Block Grant Program, authorized by Public Law 97-35 in 1981. Prior to that law's implementation, all treatment clinics receiving Federal funding were required to report on each person treated through the Client Oriented Data Acquisition Process (CODAP). These important data, along with other information, allowed the Federal government to estimate the incidence and prevalence of various types of drug abuse. However, State agencies and treatment clinics receiving Federal funds are no longer required to submit CODAP information to the Federal government, although approximately half the States continue to do so voluntarily. As a result of this and related changes, CODAP data cannot be used to estimate incidence at the Federal level, and responsibility for treatment program data collection and oversight now resides at the State level. 5/

The importance to the criminal justice system of developing better State and local measures of the various categories of drug abuse cannot be overemphasized. As stated in the National Institute of Justice (NIJ) Research Program Plan (Fiscal Year 1987), "Surveys indicate that almost two-thirds of all prisoners in state facilities were under the influence of one or more illegal drugs when they committed the crimes for which they were incarcerated, or had drunk heavily just before the offense." 6/ Drug abusers often turn to crime in order to support the cost of their drug dependency; and, in general, evidence of close relationships between drugs and crime has solidified. For example, in 1988, over 53 percent of drug abusers entering treatment programs in Denver, Colorado, had been arrested at least once previously. 7/ Statistics abound concerning the primary drugs linked to crime, e.g., cocaine and heroin. In Philadelphia, Pennsylvania, 82 percent of male arrestees tested positive for a drug; over 92 percent of the positive tests showed use of cocaine. 8/ In Washington, D.C., 64 percent of major-offense adult arrestees tested positive for cocaine. 9/ As regards heroin, California prisoners who were heroin addicts reported committing 15 times as many robberies and 20

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5 U.S. Department of Health and Human Services, Public Health Service, National Institute on Drug Abuse, Demographic Characteristics and Patterns of Drug Use of Clients Admitted to Drug Abuse Treatment Programs in Selected Sites, Printed 1986. Also, for usage of CODAP data see, for example, Raymond H. Milkman, Evaluating Drug Abuse Treatment Programs at the Veteran's Administration Using CODAP Data, Washington, D.C., Lazar Institute, 1974; and Leon G. Hunt, Drug Incidence Analysis, White House Special Action Office for Drug Abuse Prevention, Series A, Number 3, 1974.

6 National Institute of Justice, Research Program Plan FY'87, (Washington, D.C.: U.S. Department of Justice), p. 5.

7 Bruce D. Mendelson, "Drug Use Trends in Denver and Colorado", Epidemiologic Trends in Drug Abuse: Proceedings June 1989 (Community Epidemiology Work Group, National Institute on Drug Abuse, Department of Health and Human Services), p. II-40.

8 Mark R. Bencivengo and Samuel J. Cutler, "Drug Abuse in Philadelphia, Pennsylvania," Epidemiological Trends in Drug Abuse, p. II-168.

9 George C. McFarland, "Drug Abuse Indicators Trend Report-Washington, D.C.," Epidemiological Trends in Drug Abuse, p. II-40.

times as many burglaries as non-drug users. 10/ Recent studies support the link between heroin and crime, showing that "heroin-using offenders are more likely than other offenders to commit robbery and weapons offenses, and equally likely to engage in violent crimes." 11/

Improved assessment techniques would permit better targeting of treatment resources and therefore enable more of these abusers to be steered toward and successfully treated by drug abuse clinics. Thus, the social and financial costs that would otherwise result from their crimes and incarceration would be avoided, or at least greatly reduced. Similarly, more accurate assessment tools would facilitate expanded efforts to catch and prosecute suppliers and dealers, leading to decreases in the number of drug abusers clogging the criminal justice system and a resulting decrease in operations costs. Prison overcrowding is another problem which would be alleviated by the success of these efforts.

In addition to benefitting the criminal justice system, improvements in State and local assessments of the incidence and prevalence of various types of drug abuse would increase the effectiveness of drug treatment programs. An enormous amount is spent each year on drug and alcohol abuse treatment and prevention services throughout the U.S. (over $3 billion was spent in 1987 alone). 12/ Decisions on how these funds will be spent are made mainly at the State level by State Alcohol and Drug Abuse Directors. These directors work with two broad objectives in mind: 1) to accurately assess the problems of drug abuse in their States, and 2) to effectively target the available funds towards solving these problems. Obviously, the second objective cannot be achieved unless the State agency has successfully accomplished the first objective.

Assessing the incidence and prevalence of drug abuse at the local and State level is the vital first step in any drug initiative. This is true regardless of whether the initiative is directed toward increasing the effectiveness of law enforcement efforts or treatment programs. Funding for drug law enforcement and treatment and prevention services must be targeted to meet the specific needs of each State or jurisdiction, and this cannot be accomplished in the absence of an accurate assessment of the incidence and prevalence of various types of drug abuse within the local environment.

To effectively address the numerous problems stemming from drug abuse, whether by developing appropriate treatment program capacity at the community level or better estimates of drug-related crimes, State and local governments must be able to accurately assess the extent and features of their drug abuse problems. There are no national standards or guidelines to aid them in accomplishing this task. Many different

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10 Mary G. Graham, "Controlling Drug Abuse and Crime: A Research Update," NIJ Reports, SNI 202, National Institute of Justice, March/April, 1987.

11 Bernard A. Gropper, "Drug Addiction is a Major Problem," in David L. Bender and Bruno Leone (ed.), Chemical Dependency, St. Paul, Minnesota, Greenhaven Press, 1985, p. 160.

12 Highlights from the 1987 National Drug and Alcohol Treatment Unit Survey (NDATUS), Division of Epidemiology and Statistical Analysis, NIDA, p. 6.

methodologies exist for data collection and analysis, and each State and local government utilizes whatever methodology or combination of methodologies is most appropriate and readily usable in the judgment of cognizant officials. In order to improve the state of knowledge about how State and local governments assess the extent of their drug abuse problem, Lazar has conducted a research project with the following objectives:

- To learn how States, counties and cities currently measure the incidence and prevalence of drug abuse in their jurisdictions (what methodology or combination of methodologies are used) and how those measurements are used in planning and policy development.

- To document exemplary approaches in case studies of selected States.

1.2 Study Approach

Lazar's study approach involved the following elements:

- State of Knowledge Assessment
  Lazar conducted a telephone survey of leading experts in the field of measuring drug abuse in order to gain their insights into the focus of the projected study.

- Survey of State and Local Jurisdictions
  This task involved designing and conducting a survey of law enforcement and treatment officials in over 200 jurisdictions, including all 50 States, the District of Columbia and selected counties and cities, in order to determine what methods were currently being used to measure the incidence and prevalence of drug abuse in those jurisdictions.

- Construction of Ranking System
  After performing statistical analyses of the data gathered in the survey, Lazar developed a system to rank jurisdictions' methods of assessment in relation to each other, with the overall aim of isolating exemplary or near-exemplary methods.

- Conduct of Case Studies
  Based on the results of the expert survey and the application of the ranking system to each jurisdiction, Lazar selected twelve localities appearing to employ exemplary drug use estimation approaches for more detailed analysis. Four sites were the subjects of lengthy studies, while eight were analyzed less exhaustively.

- Report Preparation
  This document represents the study's principal product, containing a description of the survey methodology and results.

2.0 SURVEY DESIGN

2.1 Selection of Jurisdictions

Lazar selected jurisdictions to participate in its survey based on the following criteria:

- comprehensive coverage of States;
- jurisdictions cited by experts as having exemplary estimation techniques;
- geographic diversity.

Use of these criteria resulted in participation in the survey by the 50 States (a survey was sent to a representative of both a treatment and a law enforcement agency as well as to the governor of each State), the District of Columbia, 73 cities and 81 counties. In choosing cities and counties, Lazar first selected a set of jurisdictions of significant size which were located in States considered by experts to be assessing the extent of their drug abuse problems in an exemplary fashion. To ensure geographic diversity, other cities and counties within those States were selected, first on the basis of population and second on the basis of geographic diversity. For example, in New York State the most populous counties are located near New York City. Thus, in addition to those counties surrounding New York City, others were included in the survey, such as Erie and Monroe Counties, which are located in other areas of the State.

2.2 Survey Design

The instrument designed for conducting the survey was entitled "Methods Used to Assess Local Drug Use" and appears as Appendix A. In order to attain the best possible response rate, the initial mail questionnaire was followed by a second mailing to nonresponding jurisdictions as well as by a telephone follow-up, approximately one month after the second mailing, to jurisdictions which still had not responded to the survey. The survey was completed by September 1988. The instrument was divided into the following seven components.

2.2.1. Information Sources Employed

In this component of the survey instrument respondents were asked to identify, from a list of possible data sources, information either used to monitor drug use, or merely collected but not used for this purpose. As can be seen in Appendix A, eighteen possible information sources were included, such as:

- Arrests for drug use or possession;
- Urine test results from criminal justice system;
- Drug-related deaths; and
- State school surveys.

Respondents were presented with a list of common drugs of abuse (opiates, cocaine, cannabis, hallucinogens, stimulants, and depressants) and asked to indicate which information sources were used to assess each drug's use.

2.2.2. Analysis Approaches

This component of the instrument asked respondents to identify the ways in which the abovementioned information sources were used. More specifically, respondents were given five utilization approaches to choose from:

- Using sources to develop an informal estimate;
- Using mathematical or statistical models to analyze data in-house;
- Accepting data analysis performed by State agencies;
- Accepting data analysis performed by other entities; and
- Using data collected on a national or regional level to derive local drug use/abuse estimates.

2.2.3. Source Reliability and Extent of Use

The third component of the survey was designed to assess the reliability of each of the information sources mentioned above as well as the extent to which each source was used as an indicator of drug use. Respondents were asked to rate each source in terms of its reliability on a scale of 0 to 10, with 10 representing the highest possible degree of reliability. Respondents were additionally asked to assign a "low," "medium," or "high" rating to the extent to which each information source was used as an indicator of local drug abuse.

2.2.4. Accuracy of Assessments

This section involved assessing the perceived accuracy of various types of drug use estimates (rated on a scale of 0 to 10, with 10 representing the highest level of accuracy). These included estimates of:

- The total amount of drug use in the jurisdiction;
- The number of new users in the last year; and
- Trends in drug use.

Accuracy assessments were obtained for each of the six drug types mentioned previously.

2.2.5. Level of Resources

This component of the instrument was designed to ascertain the level of resources devoted to assessing drug use in each jurisdiction. Specifically, questions were asked regarding:

- The number of full-time staff "person equivalents" assigned to assess drug use;
- The level of monetary resources (excluding expenditures for permanent staff) devoted annually to performing special studies or surveys of drug use; and
- The percentage of the above resources used to hire outside experts or consultants to analyze data or perform special studies related to assessing the level of drug use in the jurisdiction.

2.2.6. Technical Assistance

To gain insights into means of helping jurisdictions achieve parity with exemplary areas, Lazar included a section on technical assistance in the survey. This component of the survey instrument was designed to determine whether or not technical assistance to improve assessments of drug use would be useful to the responding jurisdictions. In this regard, respondents were asked to judge the relative usefulness of five possible technical assistance tools:

- methodology manual and accompanying training course;
- methodology manual and accompanying video instruction;
- methodology manual and personal computer software;
- methodology manual and telephone technical assistance; and
- methodology manual and on-site technical assistance.

2.2.7. Policy Development

This section of the survey examined the extent to which drug use assessments are specifically utilized in policy development. Lazar was interested in measuring the extent to which these assessments were being used in planning and allocating resources for the following drug-related programs:

- Total allocation of drug program resources in local budget;
- Focus by key local officials on drug-related issues;
- Treatment centers;
- Services available to arrestees with drug problems;
- Services available to jail detainees and prisoners with drug problems;
- Local police;
- Special police drug programs;
- Drug testing programs;

- Training of emergency and other medical personnel in dealing with drug-related cases;
- Encouragement and training of law enforcement personnel, social workers, parent groups, clergy, youth, etc., to participate in local prevention efforts;
- Drug abuse prevention and education programs provided in public schools;
- Other drug abuse prevention programs; and
- Research or special studies related to drug abuse.

3.0 SURVEY RESULTS

3.1 Response Rates

Overall, the survey response rate was high, particularly at the State level. In fact, a response from at least one source was received from a total of 48 States. 13/ As mentioned previously, Lazar sent each State three surveys: one to a representative of the criminal justice system, one to a representative of the drug treatment system, and one to the governor. The corresponding response rates were 71 percent for the criminal justice system, 82 percent for the drug treatment system, and 48 percent for the governors. 14/ The response rate for cities was 68 percent and the response rate for counties was 56 percent. 15/

3.2 Results by Subject Area

The results of the survey are presented below. It should be noted that for the States, the more complete response, whether from a criminal justice representative or a drug treatment representative, was entered as the "primary response." It should additionally be noted that all "State" analysis pertains to this "primary response" group as opposed to all State surveys returned.

3.2.1 Information Sources Employed to Estimate Drug Use

As can be seen in Figure 1, arrest data (for drug use or possession) and drug treatment program patient records (e.g., CODAP) were the information sources most used by States to estimate drug abuse levels. It is important to note that since 1981, drug treatment program patient records such as CODAP are no longer required by the Federal Government and are only completed on a voluntary basis. Thus, while they continue to be used in some States, they do not constitute a permanent nationwide data base.

Other information sources used extensively by States included: arrests related to drug trafficking, drug-related deaths, national school surveys, State school surveys, and national household surveys. Information sources used least frequently were: incidence of Hepatitis B, school disciplinary actions, urine test results from drug abuse treatment systems and urine test results from criminal justice proceedings.

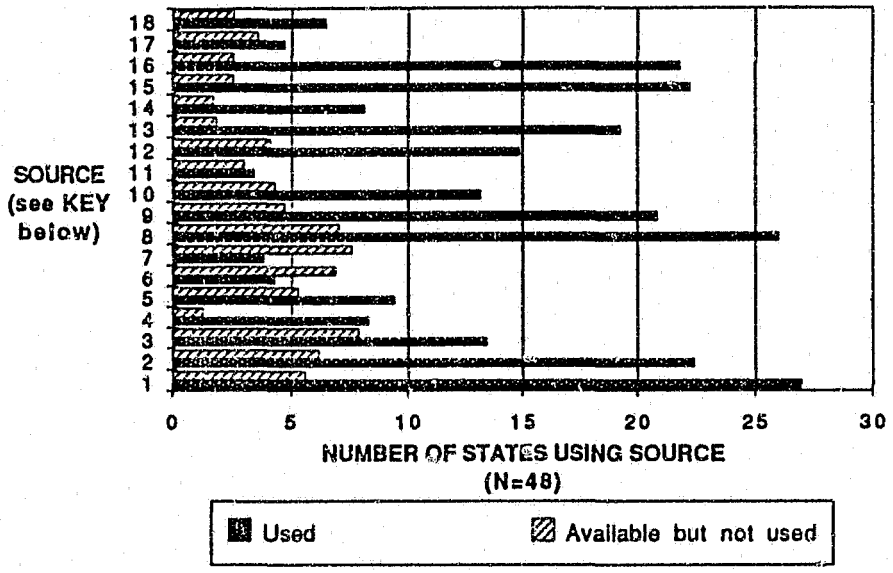
Unlike most States, most cities did not report significant usage of drug treatment program patient records. However, cities resembled States in their reliance on data on arrests for drug use or possession and arrests related to drug trafficking as indicators of the extent of drug

13 Idaho and Mississippi were the only States from which no response was received.

14 When a State returned a single questionnaire coordinated between its criminal justice, drug treatment and governor's representatives, the questionnaire was regarded as equivalent to a separate response from each.

15 The city response rate included the surveys returned from Washington, D.C. and New Orleans, Louisiana. The response from New Orleans was originally sent to the State of Louisiana; however, the response pertains only to New Orleans and thus is included as a city response.

FIGURE 1
INFORMATION SOURCES USED BY STATES



KEY:

18. Street informants/street research
17. School disciplinary actions
16. State school surveys
15. National school surveys
14. State household surveys
13. National household surveys
12. Federal reports from DAWN system (for DAWN cities)
11. Hepatitis B incidents
10. Drug-related emergency room incidents
9. Drug-related deaths
8. Drug treatment program patient records (e.g., CODAP)
7. Urine test results from drug abuse treatment system (e.g., clients)
6. Urine test results from criminal justice system (e.g., arrestees, parolees)
5. Drug price and/or purity
4. Drug-related traffic accidents
3. Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)
2. Arrests related to drug trafficking
1. Arrests for drug use or possession

use in their jurisdictions. As Figure 2 indicates, cities also depended heavily upon street informants and street research as information sources. The information sources least likely to be used by cities included incidence of Hepatitis B, national household surveys and State household surveys.

The results of the county surveys revealed more similarities to State than to city responses. For example, counties and States both relied heavily on drug treatment program patient records (see Figures 1 and 3), as well as on arrest data for drug use or possession and arrests related to drug trafficking to estimate levels of drug use. Unlike cities, counties did not tend to make extensive use of street informants and street research in measuring the incidence and prevalence of drug use in the local area. Counties were unique in their frequent use of urine test results from the drug abuse treatment system. Those information sources which counties depended on least included: drug-related traffic accidents, incidence of Hepatitis B, Federal reports from the DAWN system, State household surveys, and school disciplinary actions.

Overall, the information source used least was incidence of Hepatitis B. Several respondents' comments indicated that because contraction of Hepatitis B does not necessarily signify drug use, little or no confidence can be placed in this type of information as a reliable measure of drug use. The two information sources which States, counties and cities used to the greatest extent as an indicator of drug abuse were arrests for drug use or possession and arrests related to drug trafficking. It is interesting to note that the likelihood of using a particular information source did not, for the most part, vary depending on the drug type. Rather, an information source which was used to measure one drug type (e.g., cocaine) was often used to measure all other drug types as well.

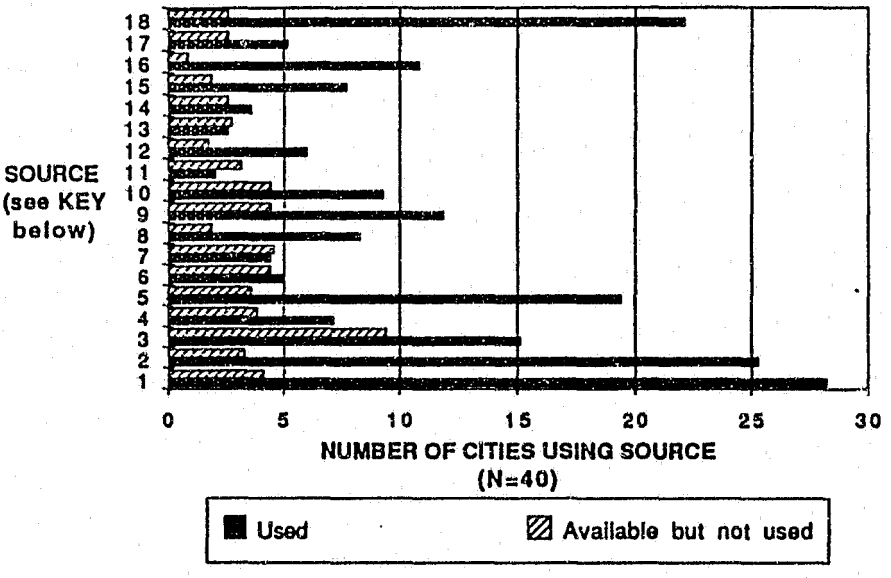
3.2.2. Analytical Approaches to Use of Information Sources (Analysis of Question 2 Responses)

As Figure 4 indicates, survey responses revealed that the development of informal estimates such as "trend lines" was by far the most likely approach to analyzing the data collected through the various information sources. Accepting the analysis performed by other entities such as the Federal government (but not State agencies) was the next most prevalent method used by the various types of jurisdictions. 16/

Over 50 percent of all data analysis performed by States fell under the "informal estimate" category, while the least likely approach for States to take was the use of mathematical or statistical models to analyze data in-house. Cities followed the same pattern as States with regard to the most and least frequently used method of analysis. Although counties also used informal estimates more frequently than any other analysis approach, they were least likely to derive estimates of local use from data collected at a national or regional level. Furthermore, compared to States and cities, counties were much more likely to use mathematical or statistical models to analyze data in-house and

16 It should be noted that the category entitled "Accept analysis of data performed by State agencies" was inappropriate to include in the State surveys and was therefore deleted.

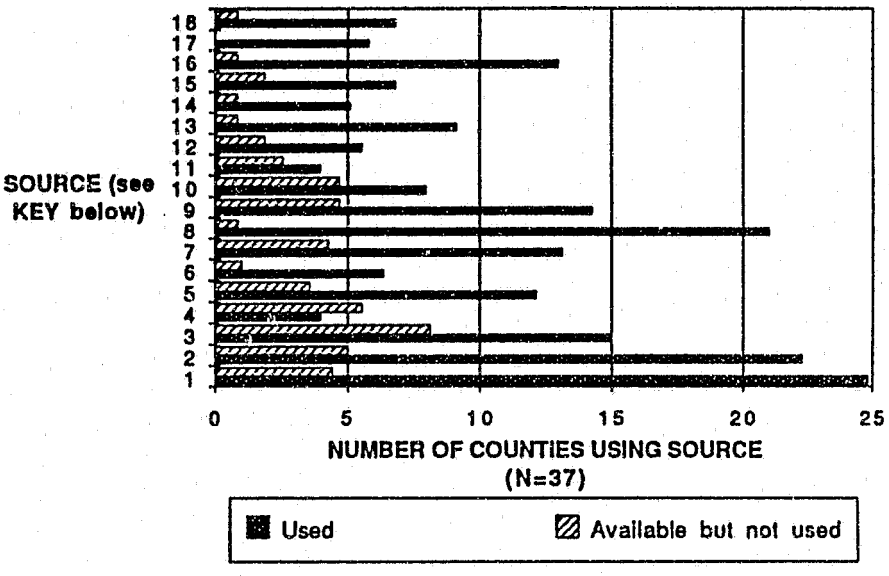
FIGURE 2
INFORMATION SOURCES USED BY CITIES



KEY:

18. Street informants/street research
17. School disciplinary actions
16. State school surveys
15. National school surveys
14. State household surveys
13. National household surveys
12. Federal reports from DAWN system (for DAWN cities)
11. Hepatitis B incidents
10. Drug-related emergency room incidents
9. Drug-related deaths
8. Drug treatment program patient records (e.g., CODAP)
7. Urine test results from drug abuse treatment system (e.g., clients)
6. Urine test results from criminal justice system (e.g., arrestees, parolees)
5. Drug price and/or purity
4. Drug-related traffic accidents
3. Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)
2. Arrests related to drug trafficking
1. Arrests for drug use or possession

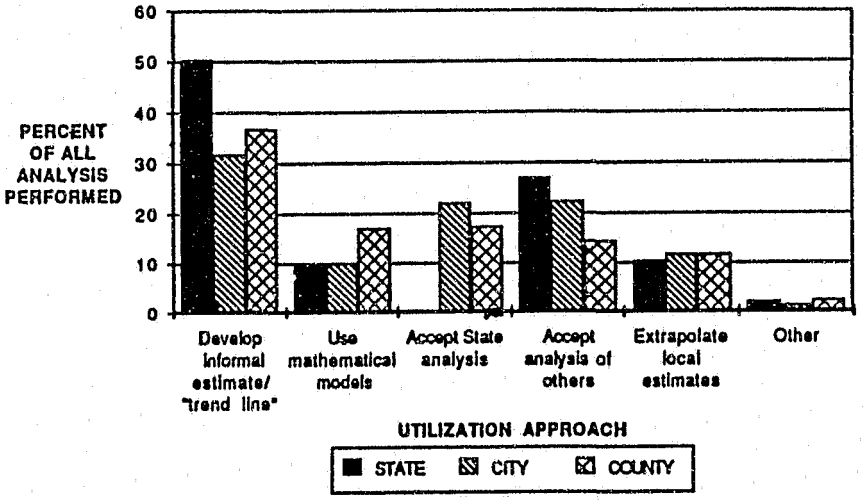
FIGURE 3
INFORMATION SOURCES USED BY COUNTIES



KEY:

18. Street informants/street research
17. School disciplinary actions
16. State school surveys
15. National school surveys
14. State household surveys
13. National household surveys
12. Federal reports from DAWN system (for DAWN cities)
11. Hepatitis B incidents
10. Drug-related emergency room incidents
9. Drug-related deaths
8. Drug treatment program patient records (e.g., CODAP)
7. Urine test results from drug abuse treatment system (e.g., clients)
6. Urine test results from criminal justice system (e.g., arrestees, parolees)
5. Drug price and/or purity
4. Drug-related traffic accidents
3. Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)
2. Arrests related to drug trafficking
1. Arrests for drug use or possession

FIGURE 4
APPROACH TO ANALYZING DATA



substantially less likely to accept the analysis of data performed by others such as the Federal government.

3.2.3 Source Reliability and Extent of Use
(Analysis of Question 3 Responses)

In this section respondents rated, on a scale of 0 to 10, the reliability of each information source. Those information sources which States viewed as most reliable included: Federal reports from the DAWN system, urine test results from the criminal justice system, State school surveys, and arrests related to drug trafficking. The sources regarded as least reliable by States were street informants/street research and school disciplinary actions.

Like the State responses, both city and county responses demonstrated confidence in data received from arrests for drug trafficking. However, information sources rated second, third and fourth most reliable by States were not identical to their counterparts for cities and counties. Both city and county officials regarded arrests for drug use or possession and drug treatment program patient records (e.g., CODAP) as very reliable sources. In addition, city officials viewed urine test results from the drug abuse treatment system as quite reliable indicators of use, while counties relied heavily on data from court dispositions related to drug arrests.

County respondents agreed with their State counterparts that the least reliable sources were street informants/street research and school disciplinary actions. Cities, on the other hand, regarded drug-related

traffic accidents and incidence of Hepatitis B as the most unreliable information sources.

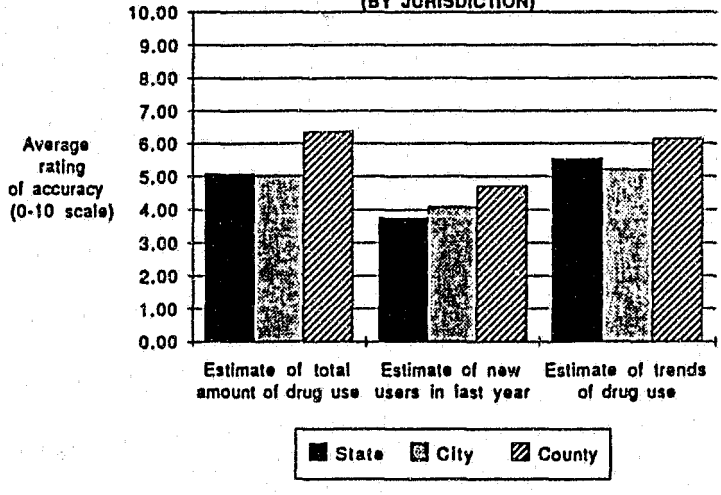
It is interesting to note that a high degree of reliability did not always coincide with high usage of the particular information source. An explanation for this may be that data from less reliable information sources are sometimes more easily accessible and therefore used in place of less accessible but more reliable information. For example, Federal reports from the DAWN system, regarded by States as a highly reliable information source, were used to a relatively low degree as an indicator of drug use in the States. The same was true of urine test results from the criminal justice system. This phenomenon also occurred in the city surveys: both urine test results from drug abuse treatment system and drug treatment program patient records were rarely cited as an indicator of drug use, despite their high reliability as information sources.

There were instances, however, in which high reliability and high usage did coincide. For example, arrests related to drug trafficking, cited as a highly reliable source by representatives of States, cities and counties, were frequently used by all three types of jurisdictions as an indicator of drug use.

3.2.4. Accuracy of Assessments (Analysis of Question 4 Responses)

As shown in Figure 5, drug use assessments were deemed to be most accurate when used to estimate trends in drug use and the total amount of drug use in the jurisdiction. It is interesting to note that, in general, counties gave higher ratings to the accuracy of their own assessments of drug use than did either cities or States. The average ratings of accuracy in counties ranged from a low of 4.2 to a high of 6.8 (on a 0 to 10 scale), while average ratings of accuracy in cities ranged from 3.7 to 6.7, and those of States ranged from 3.5 to 6.0.

FIGURE 5
ACCURACY OF DRUG USE ASSESSMENTS
(BY JURISDICTION)



Officials representing most States and cities felt that their assessments of the trends of cocaine and cannabis were more accurate than those pertaining to other drug types. On the other hand, county officials viewed their assessments of opiates and cocaine use as most accurate. State and city officials regarded their assessments of depressants as least accurate, while county officials regarded their assessment of hallucinogens as the least accurate.

3.2.5. Level of Resources (Analysis of Question 5 Responses)

This component of the survey was designed to determine the level of resources devoted to assessing drug use in each jurisdiction in terms of full-time staff "person equivalents" and monetary resources exclusive of salaries. The percentage of monetary resources used to hire outside consultants was also solicited. With respect to this last point it was found that States used a much greater percentage of their resources to hire outside experts than either cities or counties. In fact, on the average, States spent 25 percent of their monetary resources (excluding expenditures for permanent staff) on external assistance while counties spent 7 percent and cities spent less than 1 percent.

However, differences between States, cities and counties were less marked with regard to the overall level of funds devoted to assessing drug use. For example, all three jurisdictions had an average of "more than 1/2 but less than 1" permanent, full-time staff "person equivalents" devoted to drug use assessment. States generally spent between $10,001 and $25,000 on drug use assessment exclusive of salaries, while both cities and counties spent $10,000 or less annually.

It should be noted that modal responses to the questions on staff and funds were substantially lower than mean responses. For example, the modal responses pertaining to the level of funds devoted to drug use assessment in States, cities and counties were, in all cases, "none." Similarly, both cities and counties had a modal response of "none" with respect to the number of staff devoted to the assessment of drug use in their jurisdictions, even though the mean response was "more than 1/2 but less than 1." Figure 6 presents the number of full-time staff person equivalents devoted to assessing drug use in States, cities and counties.

3.2.6. Technical Assistance (Analysis of Question 6 Responses)

States, cities and counties all agreed that a manual plus an accompanying training course (two to five days long and funded by Federal and/or State agencies) had the most potential of the five suggested technical assistance tools for improvement of drug use assessments. Furthermore, this technical assistance tool was rated the most likely to be used by all three types of jurisdictions. Development of personal computer software to accompany the methodology manual was also rated highly by States, cities and counties. Several respondents noted that a combination of technical assistance tools such as a manual with training course and software or a manual with software and telephone assistance would be particularly helpful.

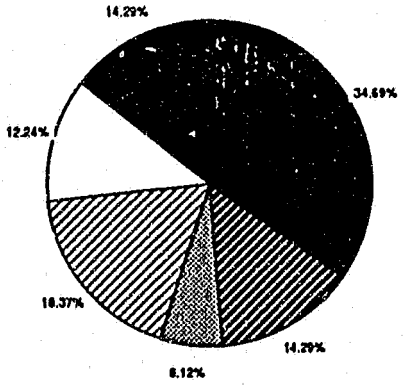
Both States and counties rated the methodology manual and telephone technical assistance as having the least potential for improvement of drug use assessments as well as being the least likely to be used of all

FIGURE 6

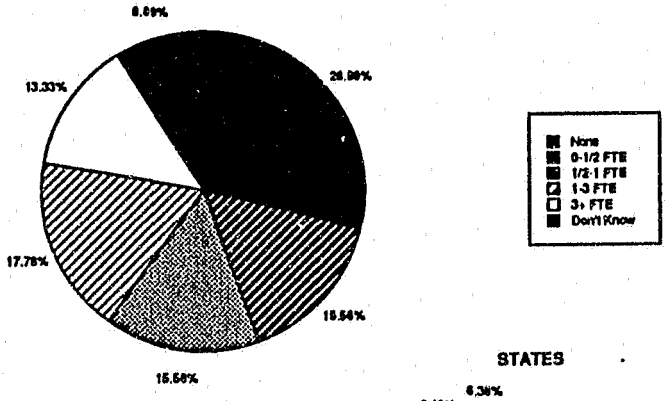
RESOURCES DEVOTED TO ASSESSING DRUG USE IN CITIES, COUNTIES AND STATES

Measured in full-time staff person equivalents

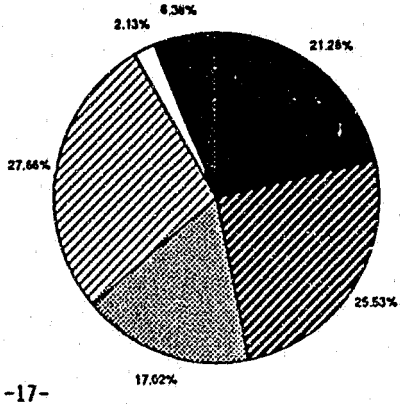
CITIES



COUNTIES



STATES



the suggested tools. Cities deviated from this pattern by ranking the manual and on-site technical assistance as the least likely technical assistance tool to be used, and least likely to improve measurements of drug use.

3.2.7. Policy Development (Analysis of Question 7 Responses)

It should be noted that this section of the survey instrument was included only in those surveys sent to cities and counties and not those sent to States. Figure 7 shows the extent to which current drug use assessments figure in policy development for both cities and counties. The responses from cities revealed that drug use assessments figured to the greatest extent in planning and allocating resources for the following drug programs: drug abuse prevention and education programs provided in public schools, special police drug programs, local police, and focus of key local officials on drug-related issues. Except for the "local police" category, policy development in all of the above programs was also influenced to a significant extent by current drug use assessments at the county level. However, for counties, policy for treatment center programs seemed most affected by current drug use assessments.

Current drug use assessments had little or no effect on policy development in two city drug programs: drug testing programs (e.g., urine tests) and research or special studies related to drug abuse (e.g., local household or school surveys). Similarly, the county responses revealed that measurements of drug use figured only insignificantly in policy development involving research or special studies. Counties also noted that training of emergency or other medical personnel for drug-related incidents was influenced very little by drug use assessments.

City and county respondents confirmed Lazar's expectation that if more reliable drug use assessments were available, they would be used to a greater extent in policy development. As illustrated in Figure 8, city and county respondents felt that if more accurate assessments were available they would be used most in planning and allocating resources for the following programs: local police; special police drug programs; drug abuse prevention and education programs provided in public schools; total allocation of drug program resources in local budget; training of law enforcement personnel and other drug abuse prevention workers, and drug treatment centers. Clearly, more accurate and reliable assessments of drug use would significantly contribute to policy development.

3.3 Results of Tests of Statistical Hypotheses

Tests of differences in means were performed to explore the relationships between selected demographic characteristics and three indicators of a jurisdiction's emphasis on drug use assessment: number of full-time staff person equivalents, amount of funds, and number of methods employed in the assessment of drug use. Lazar selected the following demographic characteristics: 17/

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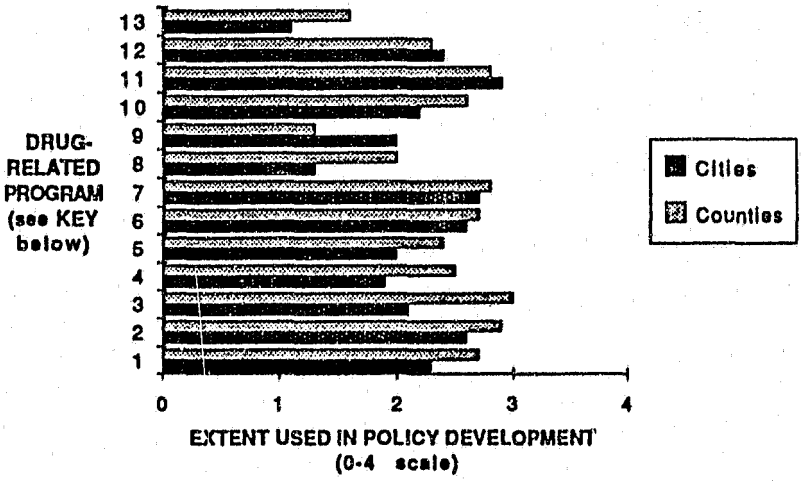
17 Information on the economic characteristics pertaining to the States, cities and counties was obtained from the County and City Data Book, 1983.

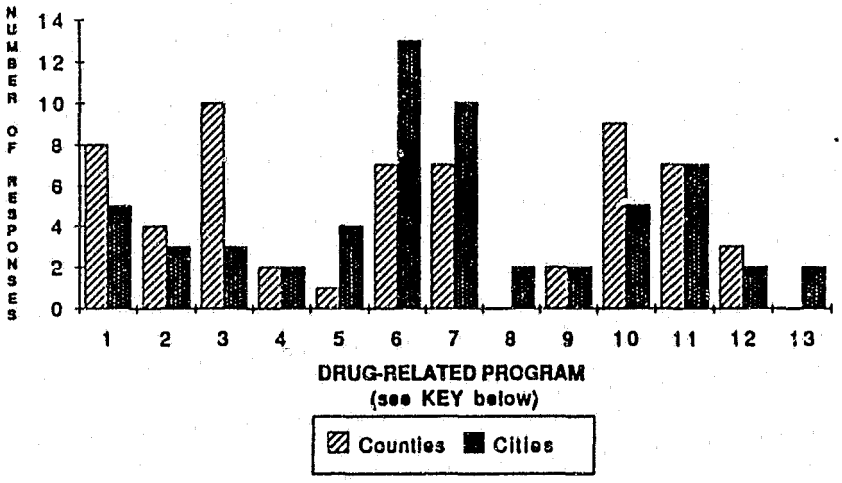
FIGURE 7
EXTENT TO WHICH DRUG USE ASSESSMENTS ARE USED
IN POLICY DEVELOPMENT IN CITIES AND COUNTIES



KEY:

13. Research or special studies related to drug abuse (e.g., local houshold or school surveys)
12. Other drug abuse prevention programs (e.g., drug information hotlines, TV spots, billboards, etc.)
11. Drug abuse prevention and education programs provided in public schools
10. Training of law enforcement personnel, social workers, parent groups, clergy, youth, etc., for participation in local prevention efforts
9. Training of emergency and other medical personnel for drug-related incidents
8. Drug testing programs (e.g., urine tests)
7. Special police drug programs
6. Local police
5. Services available to jail detainees and prisoners with drug problems
4. Services available to arrestees with drug problems
3. Treatment centers
2. Focus of key local officials on drug-related issues
1. Total allocation of drug program resources in local budget

FIGURE 8
WHICH DRUG-RELATED PROGRAMS WOULD BENEFIT MOST
FROM IMPROVED DRUG USE ASSESSMENTS
(CITIES AND COUNTIES)



KEY:

13. Research or special studies related to drug abuse (e.g., local houshold or school surveys)
12. Other drug abuse prevention programs (e.g., drug information hotlines, TV spots, billboards, etc.)
11. Drug abuse prevention and education programs provided in public schools
10. Training of law enforcement personnel, social workers, parent groups, clergy, youth, etc., for participation in local prevention efforts
9. Training of emergency and other medical personnel for drug-related incidents
8. Drug testing programs (e.g., urine tests)
7. Special police drug programs
6. Local police
5. Services available to jail detainees and prisoners with drug problems
4. Services available to arrestees with drug problems
3. Treatment centers
2. Focus of key local officials on drug-related issues
1. Total allocation of drug program resources in local budget

- size (by population);
- percent considered "urban;" 18/
- percent unemployment;
- percent of inhabitants with income below the poverty level;
- total revenue;
- total direct general expenditures per capita;
- percent of direct general expenditures spent on health and hospitals;
- percent of direct general expenditures spent on police protection; and
- property crime rate.

Tests of differences in means were conducted separately for States, cities and counties.

It was hypothesized that each of the above characteristics might have an effect on the level of resources devoted by a given State, city, or county to assessing drug use. Unfortunately, the performance of these tests did not reveal any conclusive evidence supporting this hypothesis with respect to any of the tested characteristics. 19/ For example, after testing to see if the population of a State had an effect on the level of resources devoted to drug use, it appeared that the largest 10 States did not have significantly more staff devoted to assessing drug use than the smallest ten States. Likewise, cities which had high crime rates did not necessarily devote more funds to measuring drug abuse than those cities with low levels of crime. However, it should be noted that the large jurisdictions did not have an opportunity to precisely report their resources utilized because the top categories were open-ended (e.g., more than three staff, more than 100,000). It should also be noted that statistical tests were performed on one economic characteristic at a time in order to isolate that characteristic's effects on the jurisdiction's level of resources devoted to the assessment of drug use. This approach precludes analysis of the effects of combinations of economic characteristics on a jurisdiction's level of resources used for drug assessment.

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18 Since it is inappropriate to measure the "percent urban" in cities, this was omitted from the City analysis.

19 Lazar employed the t-test, establishing the Type I error at the $\alpha = .05$ level.

4.0 RATING STATE AND LOCAL APPROACHES

4.1 Methodology

The third phase of the study consisted of the construction of a rating system for the responding jurisdictions. Lazar devised the rating system with the following aims:

- to illustrate the variance in levels of drug abuse assessment activity among various jurisdictions;
- to isolate those jurisdictions judging themselves least capable of assessing the incidence and prevalence of drug abuse in their communities; and
- to isolate those jurisdictions judging themselves most able to assess the incidence and prevalence of drug abuse in their communities.

The rating system evaluates a jurisdiction's ability to assess incidence and prevalence of drug abuse, as evinced in its response(s) to Lazar's survey instrument. The following characteristics are evaluated:

- quantity of information sources; and
- quantity and quality of analytical approaches.

For jurisdictions submitting more than one response, the more favorable response was chosen for tabulation. Incomplete questionnaires were not rated.

Lazar did not include responses to four questions from the survey in its rating system. When Lazar tabulated the responses to Questions 3 ("How Reliable is Each of Your Information Sources? To What Extent is Each Used to Assess Drug Use in Your State?") and 4 ("How Accurate are the Assessments of Drug Use in Your Jurisdiction?"), it found that a number of jurisdictions 20/ which had reported using very few available sources of information (Question 1) or methods of utilization (Question 2), as well as devoting little or no person-hours or funding to assessment (Question 5), had nonetheless given themselves high ratings for source reliability and accuracy, thereby bringing the mean and median responses well above 5 (intended to be the "normal" response). In fact, more than 77 percent of jurisdictions overall scored themselves 5 or above in average source reliability. On the basis of these statistical abnormalities, Lazar concluded that many jurisdictions had misunderstood the questions, and therefore excluded the "reliability" and "accuracy" survey questions from the rating system.

Other deletions from the rating system included Question 5 ("What Level of Resources is Devoted to Assessing Drug Use in Your State?"), whose response categories failed to adequately reflect the enormous disparities in size between jurisdictions. Question 6 ("What Types of Technical Assistance Would Be Useful for Your State?") was also excluded,

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20 Examples include the States of Virginia, Louisiana, and Arkansas.

as this question was not designed to evaluate a jurisdiction's ability to assess drug use.

4.2 Rating Parameters

For detailed information concerning Lazar's approach to scoring a jurisdiction's responses, see Appendix B. Figures 9 through 13 present the results of the rating system's application. As mentioned previously, "data sources utilized" and "analysis methods" were the criteria used to derive ratings for each jurisdiction. These two criteria were equally weighted with a score derived for each, as described in Appendix B. Once scores were available, States were ranked and then divided into three groups, so that of the 48 respondents the 12 highest ranked States were given an A rating, the 24 next highest ranked States were given a B rating, and the lowest 12 were given a C. In addition, as explained in Appendix B, some borderline States were given a + rating, creating a group of B+ and C+ rated jurisdictions. Cities and counties were rated with the same scoring system applied to the States.

FIGURE 9
RATINGS OF STATE SELF-EVALUATIONS

Alabama	C	Nebraska	C
Alaska	B	Nevada	B
Arizona	A	New Hampshire	B
Arkansas	C	New Jersey	A
California	A	New Mexico	A
Colorado	A	New York	A
Connecticut	B	North Carolina	B+
Delaware	C	North Dakota	C
Florida	A	Ohio	B
Georgia	B+	Oklahoma	B+
Hawaii	C+	Oregon	B+
Illinois	A	Pennsylvania	B
Indiana	C	Rhode Island	A
Iowa	B	South Carolina	C+
Kansas	B	South Dakota	B
Kentucky	A	Tennessee	B
Louisiana	C+	Texas	B+
Maine	B+	Utah	A
Maryland	B	Vermont	B
Massachusetts	A	Virginia	C
Michigan	B	Washington	B+
Minnesota	B+	West Virginia	B+
Missouri	B	Wisconsin	B
Montana	C	Wyoming	C+

FIGURE 10
RATINGS OF CITY SELF-EVALUATIONS

AZ:	Phoenix	C
AZ:	Sierra Vista	C
AZ:	Yuma	B+
CO:	Aurora	B
CO:	Colorado Springs	C+
CO:	Denver	C
CO:	Grand Junction	C
CO:	Lakewood	C
CO:	Pueblo	C
DC:	Washington	A
FL:	Fort Lauderdale	B
FL:	Jacksonville	B
FL:	Miami	A
FL:	Orlando	C+
FL:	Tallahassee	B
FL:	Tampa	A
IA:	Des Moines	B
IA:	Dubuque	C
IA:	Waterloo	C+
IL:	Peoria	B
LA:	New Orleans	B
MD:	Baltimore	B+
MD:	Frederick	B
MD:	Hagerstown	B
MD:	Rockville	A
MD:	Salisbury	C
MI:	Ann Arbor	A
MI:	Flint	A
MI:	Lansing	C
NJ:	Camden	B+
NJ:	Elizabeth	C
NY:	Albany	B+
NY:	Buffalo	A
NY:	New York	A
OR:	Eugene	C+
OR:	Salem	B
PA:	Allentown	A
PA:	Harrisburg	C
PA:	Lancaster	B
PA:	Philadelphia	B+

FIGURE 11
RATINGS OF COUNTY SELF-EVALUATIONS

AZ:	Cochise	C
CA:	Fresno	B
CA:	Los Angeles	A
CA:	Orange	A
CA:	Riverside	C
CA:	Sacramento	C
CA:	San Diego	B+
CA:	Santa Clara	B
FL:	Fort Lauderdale	C
FL:	Hillsborough	B
FL:	Metro-Dade	A
FL:	Orange	C
FL:	Palm Beach	B
FL:	Pinellas	B
IL:	Cook	C
IL:	Kane	B
MD:	Anne Arundel	A
MD:	Baltimore	A
MD:	Howard	C+
MD:	Montgomery	B+
MD:	Prince George's	A
MI:	Genesee	C
MI:	Ingham	C
MI:	Kent	B
MI:	Oakland	A
MI:	Washtenaw	B
NJ:	Hudson	C
NY:	Erie	B
NY:	Monroe	B
NY:	Nassau	B+
NY:	Onondaga	C
NY:	Westchester	C
OR:	Washington	B
OR:	Lane	B
OR:	Marion	A
OR:	Multnomah	A
PA:	Bucks	C

FIGURE 12
OVERALL GRADE DISTRIBUTION

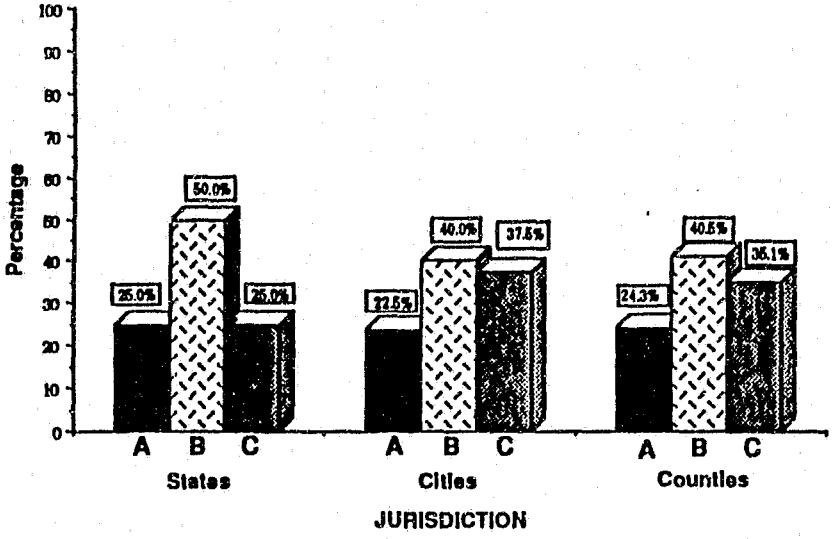
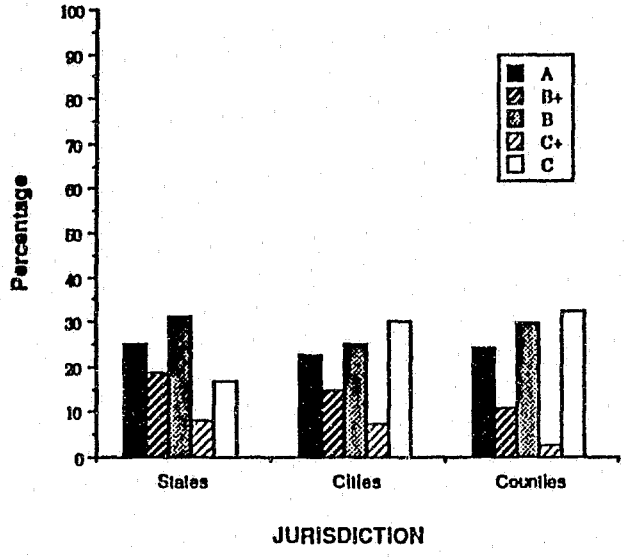


FIGURE 13
OVERALL GRADE DISTRIBUTION (DETAILED)



It cannot be too strongly emphasized that Lazar's ratings are based on the jurisdiction's self-evaluations only. The ratings' most important function is their ability to illustrate the variance in levels of assessment ability and activity among different jurisdictions; they do not constitute any absolute scale of ability. It should also be noted that achieving an A rating is not tremendously difficult; and, therefore, one Federal priority should be to develop a technical assistance program that makes it possible for all States to achieve A ratings in the near future. In Lazar's view, this would be neither difficult nor expensive.

4.3 Observations

Several interesting findings can be derived from the graphical presentations of the score data.

Analysis of the percentile grade distributions of all three jurisdiction types (see Figures 12 and 13) reveals a surprising phenomenon: a similar ratio of A's to B's to C's occurs for each jurisdiction type. 21/ It is important to reiterate that differences in jurisdictions were not accounted for in the rating system, which remained essentially the same for States, counties, and cities. 22/ It appears from this investigation, therefore, that drug abuse assessment capability does not vary by jurisdictional type or form of government.

Another finding relates the size of a city to its score on the instrument. When the scores of 11 cities falling within the category of 75 largest U.S. cities are totalled and the mean is found, the resulting grade of "A" is significantly higher 23/ than the mean of the other 29 cities (a "B"). (See Figures 10 and 14.)

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21 Note that the perfect 1-2-1 ratio for States (see Figure 14) was deliberately created by Lazar in order to arrive at a satisfactory "curve" (see Appendix B).

22 The only exception to this statement is the additional category ["Accept State Data"] in Question 2 for counties and cities. However, this category added on average less than two points to a county or city's overall score.)

23 Lazar employed the t-test, establishing the Type I error at the oc = .05 level.

FIGURE 14
RELATION BETWEEN CITY POPULATION AND SCORE

RESPONDENT CITIES CLASSIFIED AS AMONG THE 75 LARGEST (1988 data):

AZ: Phoenix (10th largest)
CO: Denver (23rd largest)
DC: Washington (16th largest)
FL: Jacksonville (17th largest)
FL: Miami (36th largest)
FL: Tampa (53rd largest)
LA: New Orleans (21st largest)
MD: Baltimore (11th largest)
NY: Buffalo (47th largest)
NY: New York (1st largest)
PA: Philadelphia (5th largest)

Mean Score: A

ALL OTHER CITIES SURVEYED:

Mean Score: B

Source for Population Data: County and City Data Book, 1988 (Bureau of the Census, U.S. Department of Commerce).

5.0 CASE STUDIES

5.1 Selection Process and Study Methodology

After completing collection and analysis of data obtained through the survey instruments, Lazar chose the District of Columbia and 11 States for further study, including the States of Arizona, California, Colorado, Florida, Illinois, Maryland, Minnesota, New Jersey, New York, Oregon, and Texas. The sites were chosen through a combination of experts' recommendations and responses to the survey which indicated a superior ability to assess incidence and prevalence. Lazar's case study approach involved three steps:

- First, interviews were conducted with survey respondents at both the State and local level. More extensive information was sought regarding data sources used to measure drug use, the record-keeping system used to store and retrieve data, approaches used to analyze data, level of resources devoted to drug use assessment, policy implications of the drug use assessments, interactions between State and local agencies, barriers to developing accurate estimates and the technical assistance desired.

- During the interview, State and local officials were asked to provide copies of all relevant reports, surveys, data tables, etc. Collection of these materials was the second step in Lazar's case study approach.

- The third step involved the analysis of both the interviews and the written materials from each case study site. This resulted in the production of mini-case studies of all 12 sites and in-depth case studies of four States which appeared to be most exemplary in their assessment of drug use: California, Colorado, New Jersey and New York.

5.2 Highlights of Case Studies

All case studies have been published as separate reports; however, the following highlights provide an overview of the knowledge developed.

- All but one case study site conducts surveys of its student population. Maryland is especially noteworthy in that it has conducted eight biennial surveys of student drug use. The school survey instruments from the case study sites, which could potentially serve as models for use in other States, vary widely in length and issues addressed. For instance, the surveys conducted by California and Minnesota are very detailed and frequent, while Arizona's is quite short and probably most adaptable for use by States with limited resources. Another example which could be followed by other States is New York's school survey. New York minimizes the costs of addressing a very large population by only administering the survey every five years.

- While Colorado conducted a face-to-face survey of its adult population, New York, New Jersey, Arizona and the District of Columbia have conducted telephone household surveys. New York's survey, conducted most recently in 1986, had 6,364 respondents.

- Texas conducts surveys of both 1,027 adult male prison inmates and approximately 1,000 youth in correctional facilities.

- Arrest data are used by all case study sites and are collected and stored both through computerized systems such as New Jersey's CCH (Computerized Criminal History) Lotus-based system, as well as manually through data collection forms. An example of the latter is Illinois' "MEG/Task Force Monthly State and Local Law Enforcement Assistance Act Report" which collects data from narcotics task forces and metropolitan enforcement groups (MEG).

- Treatment information is used by all the case study sites to assess the level of drug abuse in the jurisdiction. In most cases, treatment information is stored on a computerized system such as Oregon's Client Process Monitoring System (CPMS) or Maryland's Substance Abuse Management Information System (SAMIS). Other States, such as Arizona and New Jersey, have continued to use the Client Oriented Data Acquisition Process (CODAP) which was, until 1981, mandated by the National Institute on Drug Abuse.

- Most States rely on Federal DAWN (Drug Abuse Warning Network) data for information on drug-related emergency room incidents. New York, however, has established a Mini-DAWN system involving ten voluntarily participating hospitals. This system appears easily replicable, even in those States with minimal resources available.

- Many States rely on Federal Drug Use Forecasting (DUF) data for information on urine test results in the criminal justice system. However, Washington, D.C. and Multnomah County, Oregon conduct supplementary urinalysis tests of arrestees.

- In many States, the analysis of drug-related data involves simple graphic and tabular presentations, trend analysis and projections. Projections are often made from survey results and use census demographic data to appropriately weight various subgroups (e.g., 18-24 year olds, Hispanics, etc.)

- California and New York also employ more sophisticated analysis approaches such as capture/recapture, upper and lower bound estimations, factor analysis, regression analysis and synthetic estimation to measure their drug-abusing, particularly heroin-abusing, populations.

- Resource allocation models, such as those used in California and Colorado, have obvious policy implications in that they could be used to divide scarce funds among a number of local jurisdictions based on those areas' potential for substance abuse. In reality, these models have not been used to divide scarce funds, but rather as formulas for planning purposes.

- In general, the collection and assessment of drug-related data is used to substantiate budget requests and support new or modified legislative initiatives. The link between epidemiology and policy appears to be strongest in New Jersey.

6.0 CONCLUSIONS

6.1 Approach

In order to pursue its investigation of drug abuse assessment methods by State and local governments, Lazar amassed a data base of information collected from many sources. These sources included:

- nearly 200 jurisdictional responses to a survey instrument created to evaluate assessment methods, including non-quantitative comments as well as those structured by the survey format;
- experts in the field of drug abuse assessment surveyed during the initial phase of the investigation;
- State officials interviewed during the conduct of case studies; and
- related materials provided by the State officials interviewed.

With the aid of a number of statistical inference techniques, this information pertaining to the assessment of drug use at the local level was analyzed and various relevant hypotheses were tested, as described in the third section of this report.

In addition, Lazar implemented a rating system of its own devising (described in the fourth section of this report) to arrive at formalized ratings of jurisdictional assessment abilities derived from responses to the survey instrument. Ratings appear in Figures 10, 11 and 12. As the ratings are based on jurisdictions' self-evaluations, they cannot be viewed as "objective"; rather, they should serve to illustrate the variance in levels of drug abuse assessment ability and activity among jurisdictions.

States receiving high grades or praise from drug abuse assessment experts were selected for more detailed analysis in the form of case studies. The case study sites included the District of Columbia and the States of Arizona, California, Colorado, Florida, Illinois, Maryland, Minnesota, New Jersey, New York, Oregon, and Texas.

6.2 Major Findings

Based on analysis of the data collected, Lazar's findings with regard to the principal questions addressed by the research effort are as follows.

- States, counties and cities are using a range of information sources to measure the incidence and prevalence of drug use in their jurisdictions.
- Overall, the jurisdictions studied are using elementary approaches to analyze available data on drug use. Sophisticated methodologies are rarely employed.

- Each type of jurisdiction is making considerable use of particular information sources (e.g., arrests for drug use or possession) that they regard as quite reliable.

- Officials in all three types of jurisdictions exhibited significantly less than total confidence in the accuracy of their drug use assessments. In no category of jurisdictions did officials give their assessments a "passing grade" (i.e., at least 7 on a scale of 10).

- Many of the jurisdictions are not devoting any resources to assessing drug use.

- Formal training is considered a more effective means of developing expertise in drug use assessments among State and local staff members than such other approaches as on-site technical assistance, video instruction, computer software, and telephone instruction.

- It appears that State and local practitioners would welcome the provision of a methodology manual and a training course on assessing drug use.

- Drug use assessments are being used to some extent to develop policy for relevant programs in cities and counties, but their use for this purpose could be expanded considerably. Policy for drug testing programs, for example, is being formulated with relatively little consideration of drug use assessments, particularly in cities.

- Drug use assessments would have a greater influence on program policies if city and county officials had a higher degree of confidence in their accuracy.

6.3 Conclusions

Lazar has drawn the following conclusions from the above findings.

- Although State and local governments are in general collecting appropriate data that they view as reliable, they are not in most cases employing the analytical tools that would enable them to maximize the accuracy of their drug use assessments. Only a handful of State and local governments assessed by Lazar are comparable to the Federal government in terms of their ability to estimate levels of drug abuse in their jurisdictions.

- The limited and often nonexistent resources devoted to drug use assessments probably contribute to the actual and perceived lack of accuracy of such assessments, which in turn reduces their influence in policy formulation.

- The lack of a consensus at the Federal level on how to assess the incidence and prevalence of drug use and the paucity of Federal guidance have undoubtedly contributed to the absence of any standardized approach and the general inadequacy of efforts by State and local governments.

- There are States (e.g., New York and Arizona) whose drug abuse assessment activities include exemplary efforts that could be replicated inexpensively by less advanced jurisdictions.

- If State and local governments are willing to alter their priorities and devote a small increase in staff resources to drug use assessment, the actual and perceived accuracy of such assessments could be significantly improved. This assumes that the Federal government will assist through development of a model approach and provision of a how-to manual and a staff training course. This in turn should increase the use and value of the assessments in developing policies for various drug-related programs.

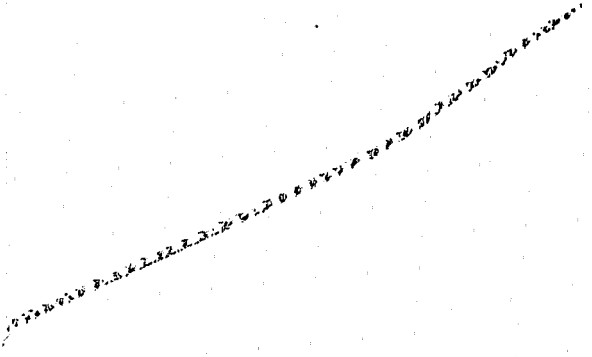
6.4 Recommendations

In light of the significant and growing level of resources being devoted to drug-related programs by all levels of governments, prudent public policy dictates that steps be taken to increase the cost-effectiveness of such programs. Lazar believes that one means of accomplishing this is to develop more accurate drug use assessments and to use these assessments in planning and implementing programs aimed at addressing drug abuse.

Toward that end, Lazar recommends that a program be developed by the Department of Justice in cooperation with the Department of Health and Human Services to provide technical assistance in drug abuse assessment to States, counties and cities. This assistance will be most effective if the Federal government first reaches agreement on the drug use assessment approaches that are most appropriate for use at State and local levels. The proposed program should, at a minimum, consist of developing a manual on such assessment techniques and the delivery of an accompanying training course, preferably to be offered in each of the 10 Federal regions. It is particularly important that this aid be available to the significant number of jurisdictions (roughly four out of five) whose ratings revealed a need to improve their assessment techniques. In this regard, consideration should be given to using the training facilities and administrative staff of the Federal Emergency Management Agency to establish a training program in drug abuse epidemiology for State and local officials. In addition, Lazar recommends that jurisdictions' abilities to accurately assess the incidence and prevalence of drug abuse continue to be monitored for the purpose of determining whether the problems identified in this study are being eliminated.

APPENDIX A
SURVEY INSTRUMENT

The survey instrument contained in this Appendix was utilized for cities and counties. The instrument employed in the survey of States contained the same questions but was appropriately modified for that audience.



METHODS USED TO ASSESS LOCAL DRUG USE

- SURVEY OF COUNTIES AND CITIES -

Information about person completing survey form:

Name _____ Telephone (____) _____

Title _____

Organization _____

Address _____

With the support of a grant from the National Institute of Justice, U.S. Department of Justice, the Lazar Institute is conducting a study of the methods that State and local governments use to assess the extent of drug abuse in their jurisdictions. To gather information for this research, we are surveying a sample of States, counties and cities to learn more about the approach they use to monitor the incidence and prevalence of drug abuse in their locales. In this regard, we would appreciate your response to the following questions about the assessment methods used in your area. If you have any questions, please do not hesitate to contact Raymond H. Milkman, the Project Director, who may be reached by telephone at (703) 821-0900, or in writing at the Lazar Institute, 6726 Lucy Lane, McLean, Virginia 22101.

IMPORTANT PREFATORY NOTE

Lazar is aware that some jurisdictions do not make their own assessments of drug use in their areas but instead rely solely on information provided to them by State, Federal or other agencies outside their locale. If your area falls into this category please skip Questions 1, 2 and 3 and complete only Questions 4, 5, 6 and 7 of this instrument. Please indicate in the space provided for comments in Question 4 the outside agency which develops drug use assessments for your area.

1. **WHAT INFORMATION DO YOU EMPLOY TO UNDERSTAND AND ASSESS DRUG USE IN YOUR JURISDICTION?**
The table below depicts both drugs with the potential to be abused and various types of information that could be collected to assess each drug's incidence and prevalence of use. Some of the types of data listed may be collected in your jurisdiction but not used to monitor drug use. (Please mark a (single) X in each applicable box to indicate the data are both available and are used to make drug use assessments; mark a (double) XX to indicate that the data are available but not used.) If there is a major drug of abuse in your locale (e.g., PCP, inhalants) that you measure independently, please list it under Drug Type "Other." Also, if there is another information source you use, please list it under "Other."

		DRUG TYPE						
	INFORMATION SOURCE	OPIATES	COCAINE	CANNABIS	HALLUCINOGENS	STIMULANTS	DEPRESSANTS	OTHER (PLEASE SPECIFY):
Justice-related	Arrests for drug use or possession							
	Arrests related to drug trafficking							
	Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)							
	Drug-related traffic accidents							
	Drug price and/or purity							
	Urine test results from criminal justice system (e.g., arrestees, parolees)							
Health-related	Urine test results from drug abuse treatment system (e.g., clients)							
	Drug treatment program patient records (e.g., CODAP)							
	Drug-related deaths							
	Drug-related emergency room incidents							
	Hepatitis B incidents							
	Federal reports from DAWN system (for Dawn cities)							
Other	National household surveys							
	State household surveys							
	National school surveys							
	State school surveys							
	School disciplinary actions							
	Street informants/street research							
	Other (please specify):							

If you have marked some boxes with a double XX (i.e., indicating the data are available but not used in your assessment of drug use), please comment on why these data are not currently being used.

2. HOW IS THE INFORMATION YOU COLLECT UTILIZED TO ASSESS DRUG USE?
Each of the potential information sources is again depicted in the table below. Please indicate the ways you use the data from each information source by marking an X in the appropriate boxes.

	INFORMATION SOURCE	UTILIZATION APPROACH					
		Use to develop an informal estimate (e.g., "trend line")	Use mathematical or statistical models to analyze data in-house	Accept analysis of data performed by State agencies	Accept analysis of data performed by others (e.g., Federal government, etc.)	Use data collected on a national or regional level to extrapolate local estimates	OTHER (PLEASE SPECIFY)
Justice-related	Arrests for drug use or possession						
	Arrests related to drug trafficking						
	Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)						
	Drug-related traffic accidents						
	Drug price and/or purity						
	Urine test results from criminal justice system (e.g., arrestees, parolees)						
	Urine test results from drug abuse treatment system (e.g., clients)						
Health-related	Drug treatment program patient records (e.g., CODAP)						
	Drug-related deaths						
	Drug-related emergency room incidents						
	Hepatitis B incidents						
	Federal reports from DAWN system (for Dawn cities)						
Other	National household surveys						
	State household surveys						
	National school surveys						
	State school surveys						
	School disciplinary actions						
	Street informants/street research						
	Other (please specify):						

3. HOW RELIABLE IS EACH OF YOUR INFORMATION SOURCES? TO WHAT EXTENT IS EACH USED TO ASSESS DRUG USE IN YOUR AREA?

Please assess the reliability of each information source listed below by using a scale of 0 to 10, based on the following benchmark definitions:

- 10 - Information source is fully reliable.
- 5 - Information source is fairly reliable but has some flaws.
- 0 - Information source is seriously flawed.
- NA - Information source exists in my jurisdiction but is not accessible (e.g., confidential urine test records).
- NC - This information is not collected in my jurisdiction (e.g., no arrestee urine testing program).
- ? - I don't have enough knowledge to comment on the reliability or accessibility of this information source.

In addition, please indicate the extent to which each information source is used as an indicator of drug use by using the following scale:

- High - Information source is used as a major indicator of drug use.
- Medium - Information source is used as a secondary indicator of drug use.
- Low - Information source is not used as an indicator of drug use.

	INFORMATION SOURCE	RELIABILITY RATING (0-10, NA, NC, ?)	USAGE (H, M, L)
Justice-related	Arrests for drug use or possession		
	Arrests related to drug trafficking		
	Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)		
	Drug-related traffic accidents		
	Drug price and/or purity		
	Urine test results from criminal justice system (e.g., arrestees, parolees)		
Health-related	Urine test results from drug abuse treatment system (e.g., clients)		
	Drug treatment program patient records (e.g., CODAP)		
	Drug-related deaths		
	Drug-related emergency room incidents		
	Hepatitis B incidents		
Other	Federal reports from DAWN system (for Dawn cities)		
	National household surveys		
	State household surveys		
	National school surveys		
	State school surveys		
	School disciplinary actions		
	Street informants/street research		
	Other (please specify):		

Please comment on how the reliability of specific information sources could be improved:

4. **HOW ACCURATE ARE THE ASSESSMENTS OF DRUG USE IN YOUR JURISDICTION?**
Assume that a perfect estimate of drug use is represented by a score of 10 and a completely unreliable estimate is represented by a score of 0. Please use this rating scale to indicate your perception of the accuracy of (a) the estimated total amount of drug use, (b) the estimated number of new users within the last year; and (c) estimated drug use trends with regard to each of the following drug types.

DRUG TYPE	(a) Perceived Accuracy of Estimate of Total Amount of Drug Use in Jurisdiction	(b) Perceived Accuracy of Estimate of Number of New Users in Last Year	(c) Perceived Accuracy of Estimate of Trends in Drug Use in Jurisdiction
OPIATES			
COCAINE			
CANNABIS			
HALLUCINOGENS			
STIMULANTS			
DEPRESSANTS			
OTHER (PLEASE SPECIFY):			
OTHER (PLEASE SPECIFY):			

PLEASE COMMENT ON HOW THESE ESTIMATES COULD BE IMPROVED:

5. **WHAT LEVEL OF RESOURCES IS DEVOTED TO ASSESSING DRUG USE IN YOUR JURISDICTION?**
Please estimate the amount of resources devoted to assessing drug use in your jurisdiction by answering the following questions.

a. How many permanent full-time staff "person equivalents" are assigned to assess drug use in your jurisdiction?

☐ None ☐ More than 0 but no more than 1/2 ☐ More than 1/2 but no more than 1
☐ More than 1 but no more than 3 ☐ More than 3 ☐ Don't know

b. In addition to the permanent staff assigned to make assessments of drug use in your jurisdiction, approximately what level of resources is devoted annually to performing special studies or surveys of drug use?

☐ None ☐ More than 0 but no more than $10,000 ☐ More than $10,001 but no more than $25,000
☐ More than $25,001 but no more than $100,000 ☐ In excess of $100,000 ☐ Don't know

c. Approximately what percentage of these resources is used to hire outside experts or consultants to analyze data or perform special studies related to assessing the level of drug use in your jurisdiction? _____ percent

6. **WHAT TYPES OF TECHNICAL ASSISTANCE WOULD BE USEFUL FOR YOUR JURISDICTION?**
Please **rank** (1 . . . 5 or 6), with 1 being the most important, the following technical assistance tools in terms of their potential for improving assessments of drug use in your jurisdiction. Please note that a methodology manual will be developed as part of this project. In addition, several types of technical assistance have been proposed to accompany the manual. Please use the following scale to indicate to what extent you would make use of each additional technical assistance tool if it was available:

High - would be very likely to make use of the tool **M**edium - would consider making use of the tool **L**ow - would not make use of the tool

If the following statement applies to your area: "Technical assistance would not be of use to my area because we do not make our own assessments of local drug use," please check this box ☐ and do not complete the table below.

TECHNICAL ASSISTANCE TOOL	RANK (1 . . . 5 or 6)	USAGE (H, M, L)
Methodology manual and accompanying training course (assume course would be two to five days long, offered at either national or regional level, and funded by Federal, State and/or local agencies).		
Methodology manual and accompanying video instruction (assume video instruction would replace training course mentioned above).		
Methodology manual and personal computer software (for use in State and local drug abuse agencies).		
Methodology manual and telephone technical assistance (expert assistance via a telephone helpline).		
Methodology manual and on-site technical assistance (e.g., one-day on-site visit by expert statistician).		
Other (please specify):		

7. **TO WHAT EXTENT ARE DRUG USE ASSESSMENTS UTILIZED FOR DRUG ABUSE POLICY DEVELOPMENT IN YOUR JURISDICTION?**

a. Listed in the table below are a number of drug treatment and drug law enforcement programs which are potential components of a jurisdiction's overall drug strategy. Please use the following ratings scale to indicate the extent to which drug use assessments (i.e., estimates of incidence, prevalence and trends of drug use) are utilized in planning and allocating resources for various drug programs in your area. If there are other drug-related efforts in your area which are not listed, please add them to the table under Local Drug Programs "Other."

Drug use assessments are:

- 4 - Used to a very great extent in policy development
- 3 - Used to a considerable extent in policy development
- 2 - Used to some extent in policy development
- 1 - Used to very little extent in policy development
- 0 - Not used in policy development
- NA - This program is not available in my area
- ? - I don't have knowledge to comment on the extent drug use assessments are used in policy development related to this program.

	USE OF DRUG ASSESSMENTS FOR:	USE RATING (4-0, NA, ?)
	• OVERALL LOCAL PLANNING RELATED TO:	
	Total allocation of drug program resources in local budget	
	Focus of key local officials on drug-related issues	
	• LOCAL DRUG PROGRAM RESOURCE ALLOCATION AND/OR POLICY DEVELOPMENT FOR:	
	Treatment centers	
	Services available to arrestees with drug problems	
	Services available to jail detainees and prisoners with drug problems	
	Local police	
	Special police drug programs	
	Drug testing programs (e.g., urine tests)	
	Training of emergency and other medical personnel for drug-related incidents	
	Training of law enforcement personnel, social workers, parent groups, clergy, youth, etc., for participation in local prevention efforts	
	Drug abuse prevention and education programs provided in public schools	
	Other drug abuse prevention programs (e.g., drug information hotlines, TV spots, billboards, etc.)	
	Research or special studies related to drug abuse (e.g., local household or school surveys)	
	Other (please specify)	

b. If more reliable drug use assessments were available, would you utilize them to a greater extent in policy development?

☐ Yes If yes, please select the 2 local drug programs in the table above which you feel would benefit most from improved drug use assessments. Indicate your selections by placing an X in the column to the left of these programs in the table above. (Choose only 2.)

☐ No If not, why not? _____

c. Please comment on other ways in which drug use assessments are (or potentially could be) used for policy development at the local level.

_____

_____

APPENDIX B
RATING SYSTEM METHODOLOGY

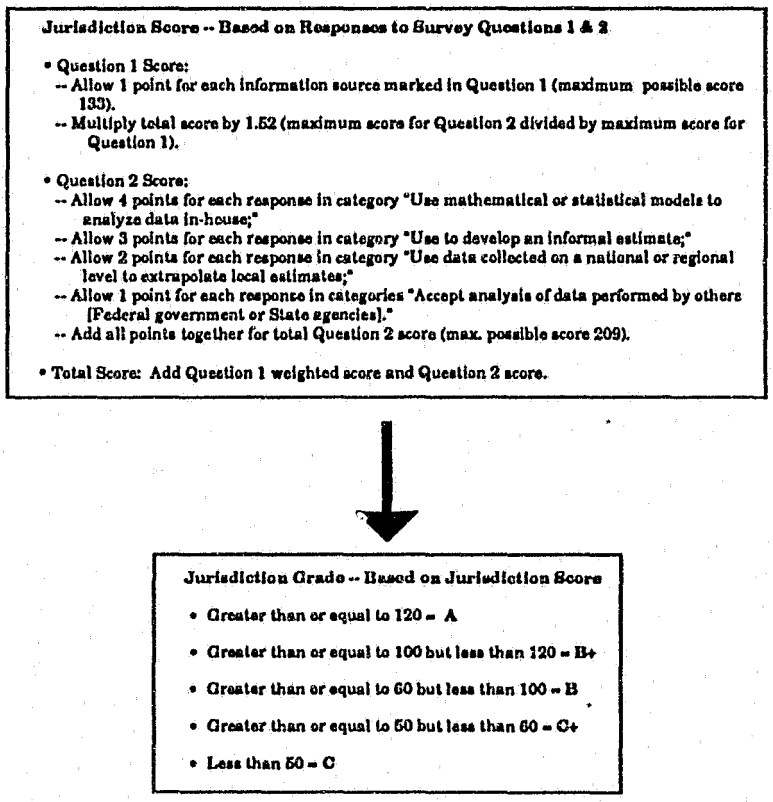
B.1 Summary

This appendix describes Lazar's weighting and scoring system for evaluating the completed "Methods Used to Assess Local Drug Use" questionnaires. Rationales for scoring responses to each graded question appear below, accompanied by a sample graded questionnaire. A flow chart describing the overall grading process appears as Figure B-1.

B.2 Rating Parameters

Responses to Questions 1 and 2 were manipulated to arrive at a jurisdiction's overall score.

FIGURE B-1
SURVEY GRADING METHODOLOGY



For Question 1, one point was given to each information source employed to assess the use level of a particular drug, with a possible maximum total of 108 points. "Other" responses also were counted, with one point given for each response (25 possible points); thus, the maximum possible score for Question 1 was 133. The raw score was then multiplied by a constant which consisted of the maximum possible score on Question 2 divided by the maximum possible score on Question 1. For a visual example of the scoring system for Question 1, please see Figure B-2.

For Question 2, the 90 possible responses were weighted according to Lazar's assessment of the complexity of the various utilization approaches. Lazar allowed one point for each response under the headings "Accept analysis of data performed by others (e.g. Federal government, etc.)" and "Accept analysis of data performed by State agencies" (the latter category appeared only on county and city questionnaires). Two points were given for responses under the heading "Use data collected on a national or regional level to extrapolate local estimates." Three points were given for responses under the heading "Use locally collected data to develop an informal estimate (e.g., 'trend line')". Finally, four points were given for responses under the heading "Use mathematical or statistical models to analyze data locally collected in-house." In this way, credit varied directly with a jurisdiction's level of independence in attempting to assess local drug abuse. Incorporating possible "other" responses, this weighting system allowed a maximum score of 209. B1/ For a visual example of Question 2's grading system, see Figure B-3.

Finally, the weighted scores derived from both sections of the instrument were totalled to arrive at the jurisdiction's overall score. The scores were graded on the following basis:

- scores of 120 or more were considered an A;
- scores greater than or equal to 100 but less than 120 were considered a B+;
- scores greater than or equal to 60 but less than 100 were considered a B;
- scores greater than or equal to 50 but less than 60 were considered a C+; and
- scores less than 50 were considered a C.

The interval lengths were set with the aim of ensuring that a "curve" was created that led to 25 percent of States receiving an A grade, 50 percent a B grade and 25 percent a C. The cities and counties were then graded according to the same approach and received somewhat (but not significantly) lower grades.

Score data is presented in Figures 9 through 13 in the main body of the text.

B1 The vertical "other" category was not used by respondents and was therefore disregarded.

FIGURE B-2
RATING SYSTEM FOR QUESTION 1

1. WHAT INFORMATION DO YOU EMPLOY TO UNDERSTAND AND ASSESS DRUG USE IN YOUR JURISDICTION?
The table below depicts both drugs with the potential to be abused and various types of information that could be collected to assess each drug's incidence and prevalence of use. Some of the types of data listed may be collected in your jurisdiction but not used to monitor drug use. (Please mark a (single) X in each applicable box to indicate the data are both available and are used to make drug use assessments; mark a (double) XX to indicate that the data are available but not used.) If there is a major drug of abuse in your locale (e.g., PCP, inhalants) that you measure independently, please list it under Drug Type "Other." Also, if there is another information source you use, please list it under "Other."

		DRUG TYPE						
	INFORMATION SOURCE	OPIATES	COCAINE	CANNABIS	HALLUCINOGENS	STIMULANTS	DEPRESSANTS	OTHER (PLEASE SPECIFY):
Justice-related	Arrests for drug use or possession	X	X	X	X	X	X	
	Arrests related to drug trafficking							
	Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)	X	X	X				
	Drug-related traffic accidents							
	Drug price and/or purity							
	Urine test results from criminal justice system (e.g., arrestees, parolees)		X	X				
	Urine test results from drug abuse treatment system (e.g., clients)	X	X	X				
Health-related	Drug treatment program patient records (e.g., CODAP)							
	Drug-related deaths	X	X					
	Drug-related emergency room incidents							
	Hepatitis B incidents							
	Federal reports from DAWN system (for Dawn cities)	X	X					
Other	National household surveys	X	X	X				
	State household surveys	X	X	X				
	National school surveys	X	X	X				
	State school surveys							
	School disciplinary actions							
	Street informants/street research		X					
	Other (please specify):							

(X = hypothetical response)

RAW TOTAL = 28 WEIGHTED TOTAL = 28 x 1.52 = 42.56

FIGURE B-3
RATING SYSTEM FOR QUESTION 2

2. HOW IS THE INFORMATION YOU COLLECT UTILIZED TO ASSESS DRUG USE?
Each of the potential information sources is again depicted in the table below. Please indicate the ways you use the data from each information source by marking an X in the appropriate boxes.

	INFORMATION SOURCE	UTILIZATION APPROACH					
		Use to develop an informal estimate (e.g., "trend line")	Use mathematical or statistical models to analyze data in-house	Accept analysis of data performed by State agencies	Accept analysis of data performed by others (e.g., Federal government, etc.)	Use data collected on a national or regional level to extrapolate local estimates	OTHER (PLEASE SPECIFY)
Justice-related	Arrests for drug use or possession	X (3)		X (1)			
	Arrests related to drug trafficking						
	Court dispositions related to drug arrests (convictions, acquittals, dismissals, etc.)		X (4)				
	Drug-related traffic accidents						
	Drug price and/or purity						
	Urine test results from criminal justice system (e.g., arrestees, parolees)					X (2)	
	Urine test results from drug abuse treatment system (e.g., clients)	X (3)					
Health-related	Drug treatment program patient records (e.g., CODAP)						
	Drug-related deaths	X (3)					
	Drug-related emergency room incidents						
	Hepatitis B incidents						
	Federal reports from DAWN system (for Dawn cities)				X (1)		
Other	National household surveys				X (1)		
	State household surveys			X (1)			
	National school surveys				X (1)		
	State school surveys						
	School disciplinary actions						
	Street informants/street research	X (3)					
	Other (please specify):						

(X = hypothetical response)

WEIGHTED TOTAL = 23

OVERALL SCORE = QUESTION 1 SCORE + QUESTION 2 SCORE
= 42.56 + 23, or 65.56 = B